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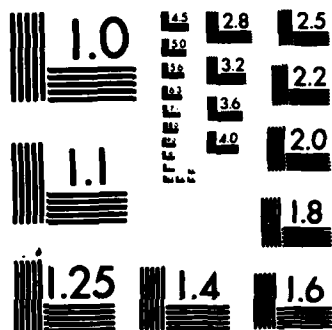
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Military Psychology: An Overview

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Military Psychology (Division 19)
American Psychological Association
Washington, D.C. 20036

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Abstract

The purpose of this article is to answer questions most often asked the American Psychological Association about military psychology. Although there are private contractors conducting psychological work for the military, the focus of this brochure is on psychology in the Department of Defense. It describes the nature of military psychology, major organizations in the Department of Defense employing psychologists, and where to write for more specific information.

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What is Military Psychology?

↓ Military psychology may be viewed as the conduct of research or practice of psychological principles within a military environment. It is often considered to be a microcosm of the field of psychology, using nearly every branch of the discipline; industrial, organizational, general, experimental, physiological, clinical, statistical, and human factors are only some of the areas incorporated by military psychology.

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Military psychologists may be either civilians or active-duty, uniformed personnel. The diversity of their functions depends on the setting, clients, and activities involved. Some of these settings are experimental laboratories, field maneuvers, schools of medicine, day care centers, hospital wards, outpatient clinics, military agencies, local community projects, military installations, research centers, and staff positions in Washington, D.C. Clients of psychologists may include military personnel and their dependents, small groups, organizations, and agencies broadly concerned with recruitment, development, use of human resources, and the delivery of human services. Activities conducted by psychologists include researching, managing, providing mental health services, teaching, consulting, working with Congressional committees, coordinating research, and advising senior military commands. The majority of psychologists are engaged in research at the Department of Defense agencies described in this brochure and on Air Force, Army, and Navy bases to study the military environment. Clinicians provide human services at military installations and academies.

Typical research topics address all aspects of the personnel management processes such as recruiting; recruit selection, classification, education, and training; motivation and productivity; career development and retention; and leadership and organization management. Psychologists also investigate the physiological and environmental factors affecting human performance, such as fatigue, stress, and the interaction of humans and machines in large scale weapon systems. Many studies extend over long periods of time and examine large groups of people with diverse capabilities. Often psychologists are part of a multidisciplinary team that may include physiologists, mathematicians, physicians, computer specialists, or operations analysts.

↓ Military clinical psychologists are primarily assigned to medical inpatient and outpatient facilities where they develop mental health programs and provide counseling. They conduct psychological testing and manage and operate programs addressing specific needs (for example, reducing drug, alcohol, or family related problems). In addition, military clinical psychologists are consultants to the military community on problems that may include discipline, organizational effectiveness, and applicant screening for highly sensitive jobs (e.g., jobs associated with nuclear energy).

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The significance of military psychology extends beyond the Department of Defense because its applications can have implications for national and social policy. Two examples are the military's leadership in the placement of women in nontraditional jobs and the integration of peoples of different ethnic and social backgrounds in work, recreation, and housing (Nichols, 1980).

A Brief History of Military Psychology

As a specific application, military psychology began in 1917 when the United States entered World War I in 1917. A committee of psychologists, under the direction of Robert M. Yerkes, recognized the need to rapidly classify the intellectual level of the one and a half million recruits to make administrative decisions about such issues as duty assignments or admission to officer training. Their efforts resulted in the first group of intelligence tests that were widely used in World War I and also served as the models for most group intelligence tests developed after the war for military and civilian application (Anastasi, 1961).

In 1918, a School of Military Psychology was established in Georgia. The names of psychologists contributing to military psychology during World War I included such notables as James R. Angell, E. G. Boring, James McKeen Cattell, Raymond Dodge, Sheppard Ivory Franz, G. Stanley Hall, Walter Dill Scott, Carl E. Seashore, E. K. Strong, Lewis M. Terman, E. L. Thorndike, John B. Watson, G. M. Whipple, and Robert S. Woodworth (Anastasi, 1961; Sperling, 1968).

In World War II more than two thousand psychologists, both in and out of uniform, worked for the military. Clinical psychologists studied combat stress and problems associated with vocational guidance and rehabilitation. Research psychologists primarily expanded the Army and Navy's selection and training programs. Later, they applied the information gained through military research to industrial problems (Gilmer, 1961).

The Division of Military Psychology was organized in 1945/46. Its original membership primarily included psychologists involved in the World War II effort. From the beginning, the membership of Division 19 has been fully representative of the mainstream of psychology as a whole (Crawford, 1968).

Between World War II and the Korean conflict in 1950, psychological testing became firmly entrenched in military personnel systems while new emphases emerged in human engineering in the Air Force and Navy. The Korean conflict produced a recall of many psychologists to work on morale and prisoner of war issues and to carry on earlier initiatives. By 1957, the first International Symposium on Military Psychology was held in Belgium (Sperling, 1968).

The history of military psychology beyond the 1960s becomes too expansive and detailed for the purposes of this article. Interested readers will find excellent reviews in the references.

Major Department of Defense Organizations That Employ Psychologists

The study of human resources and provision for human services is particularly important to the three branches of the military because personnel, with its associated training and administrative costs, is the single largest item in the Department of Defense budget. The three branches of the military employ more than 500 psychologists, most are assigned to one of the following major Department of Defense organizations.

United States Air Force

Air Force Aerospace Medical Research Laboratory, Human Engineering Division (AFAMRL)

The Aerospace Medical Research Laboratory conducts behavioral and biomedical research to better understand the effects of environmental stress conditions associated with flight. Human engineering, a division of the laboratory employing psychologists, addresses this issue through basic research, applied research, and engineering development. Major areas of study include visual perception, intellectual processes, decision making, motor skills, team performance, human-machine interactions, physical anthropology, biomechanics, and workspace layout. For additional information, write: Commander, Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, OH 45433.

Air Force Human Resources Laboratory (AFHRL)

This is the principal Air Force organization for planning and coordinating human resources research. It is responsible for conducting exploratory and advanced development programs in the areas of personnel management, weapon systems logistics, flight simulation, and technical training. The laboratory manages and/or conducts an average of 250 research and development projects organized under three divisions.

The Manpower and Force Management division identifies and measures aptitudes, experience, potential, satisfaction, job performance, career motivation, retention, individual and unit productivity. It provides computer-based personnel management tools to be used in acquisition, initial assignment, and distribution of uniformed Air Force personnel.

The Air Combat Tactics and Training division conducts basic, exploratory, and developmental research to increase combat effectiveness. It provides a technology base for high-level training

of aircrew personnel using simulated combat environments and incorporating microcomputers suitable for air-to-air and air-to-surface combat mission training.

The Weapon Systems Logistics, Maintenance, and Technical Training division provides human, logistics, and materiel resources to support Air Force operations (particularly new weapon systems). A further intent is to ensure effective team performance in ground-based systems, including nonflying crews. Techniques of training maintenance personnel are being developed including simulators and on-the-job training.

Examples of research projects conducted at the Human Resources Laboratory include updating the Enlistment Screening Test used by recruiters to predict the qualifications of applicants, simulating air turbulence on the visual monitor and g-seat of the F-16 to increase pilots' performance under turbulent conditions, and collecting base-line data on team training. For additional information, write: Commander, Air Force Human Resources Laboratory, Brooks Air Force Base, TX 78235.

Air Force Institute of Technology (AFIT)

Military psychologists are assigned to the Department of Organizational Sciences of the School of Systems and Logistics where they teach graduate level courses in the field of industrial and organizational psychology that lead to masters degrees. Psychologists also teach professional and continuing education courses. In addition, these faculty members consult with Department of Defense agencies, conduct research in related areas of interest, and guide the research of graduate students. One faculty research project is the conduct of a longitudinal evaluation research design on the effectiveness of the quality circle process throughout the Department of Defense. For additional information, write: Department Head, AFIT/LSB, Wright-Patterson Air Force Base, OH 45433.

Air Force Occupational Measurement Center (USAFOMC)

The Occupational Measurement Center conducts several programs affecting the promotion, classification, training, and use of Air Force personnel. The Occupational Analysis Program conducts surveys of the tasks performed in enlisted and selected officer and civilian specialties throughout the Air Force. Survey data are used in classification, training, research, and other personnel management decisions. Senior noncommissioned officer specialists nominated by the major commands are consulted in developing the Specialty Knowledge tests and Promotion Fitness examinations. The examinations enable the weighted airman promotion systems to identify the airmen most qualified for promotion.

The Test Development Program produces tests required by the military testing program, administers the worldwide network of test

control officers, and publishes the study reference lists for all enlisted promotion testing.

The Military Training Standard Program Development Office is responsible for the revision, development, and maintenance of the study guide for the Military Training Standard/Promotion Fitness Examination and the military training standard system.

The Training Development Service Program coordinates specialized skill training development efforts across Air Force career ladders and develops methods to apply improved training techniques to existing career-ladder instructional systems. For additional information, write: Chief, Executive Support Branch, USAF Occupational Measurement Center, Randolph Air Force Base, San Antonio, TX 78150.

Air Force Office of Scientific Research (AFOSR)

Basic psychological research is managed from this office. Unsolicited proposals in biocybernetics and visual information processing are accepted from universities and Air Force laboratories. One biocybernetics project, contracted with the Human Resources Laboratory, takes recordings to assess brain activity as it relates to sensory processing, workload, and decision making. This information is used in designing and operating crew stations developed for critical training missions. The goal of visual processing research is to develop a quantitative description of human visual processing. The information will be used in aircrew selection and development of robotic visual systems. For additional information, write: Air Force Office of Scientific Research, Bolling Air Force Base, Washington, D.C. 20332.

Air Training Command (ATC)

The Training System Directorate is the office of primary responsibility for training system research, development, and application activities in Air Training Commands. They initiate requests for personnel for training research and development. They also identify, evaluate, and develop applications of new training concepts, methods, and procedures for the command. Research focuses on flight training, technical training, personnel issues, and recruit acquisition. For example, the Air Training Command has contracted with the Human Resources Laboratory to identify characteristics that best predict performance levels of pilots and navigators. For more information, write: HQ ATC/XPTT, Randolph Air Force Base, San Antonio, TX 78150.

Biomedical Science Corps Utilization Branch

The Biomedical Science Corps is the central office for Air Force clinical psychologists. Air Force clinical psychologists are not only diagnosticians and therapists, they are also consultants to the medical and military communities. Clinicians develop and implement therapeutic and preventive mental health programs, contribute to the diagnosis and evaluation of patient needs, and perform applied research as training and professional interests allow. The Air Force offers commissioning programs that provide support to selected psychologists in the last three years of their doctorate programs and an American Psychological Association approved internship program that considers applicants from clinical and other areas of psychology. The internship programs are conducted at two locations: Department of Mental Health (SGHMS), Wilford Hall, U.S. Air Force Medical Center, Lackland Air Force Base, TX 78236; and Department of Mental Health (SGHAE), U.S. Air Force Medical Center, Wright-Patterson Air Force Base, OH 45433. For additional information on clinical psychology in the Air Force, commissioning programs, and internships, write: HQR AFMPC/SGCB, Randolph Air Force Base, TX 78150.

Leadership and Management Development Center (LMDC)

In addition to housing several specialty schools, the Center has two missions of interest to psychologists: providing management consulting services to Air Force commanders on request and conducting research on Air Force systemic issues. The Directorate of Research and Analysis of the Center provides technical, statistical, and computer support to the consulting process as well as conducting the systemic research on data obtained during consulting visits. These data are collected primarily by using the LMDC Organizational Assessment Package, an instrument measuring perception in such areas as supervision, job satisfaction, organizational climate, and work-group effectiveness. For more information write: LMDC/AN, Maxwell Air Force Base, AL 36112.

United States Air Force (USAF) Academy

The Academy's Department of Behavioral Sciences and Leadership offers courses in psychology that provide cadets with a facility for understanding human behavior, the capability of handling human problems throughout their careers as Air Force officers, and the basis for continued development as military leaders. The academic major is divided into three areas of emphasis: individual behavior, organizational behavior, and human factors engineering. For additional information, write: Professor and Head, Department of Behavioral Sciences and Leadership, United States Air Force Academy, CO 80804.

United States Army

Academy of Health Sciences (AHS)

Clinical, experimental, and educational psychologists at the Academy of Health Sciences teach classes ranging from paraprofessional to graduate level courses in behavioral science for officers in the Medical Department Advance Course. In addition, military and civilian psychologists train command staff and paraprofessional personnel in alcohol and drug abuse prevention and treatment. Research psychologists consult in the areas of course design, methods and media selection, and application of new instructional technology in military settings. They design performance oriented student evaluations, conduct systems evaluations of current training, and develop short-term counseling procedures for the military training environment. For additional information, write: Commander, Behavioral Sciences Division, Academy of Health Sciences, Fort Sam Houston, TX 78234.

Army Aeromedical Research Laboratory (USAARL)

Fundamental and applied research is conducted on the medical aspects of aviation airborne and ground operations that affect health, welfare, and efficiency of soldiers. The laboratory performs medical research on visual and auditory functions, human-machine integration, medical aspects of nonmedical material, physiological and psychological responses to operational environments, and the ecological effects of military operational training. For additional information, write: Commander, U.S. Army Aeromedical Research Laboratory, P.O. Box 577, Fort Rucker, AL 36362.

Army Disciplinary Barracks Fort Leavenworth

Between 1300 and 1600 inmates are confined in this prison, typically, for 1 to 10 years. Clinical psychologists assess inmates, provide individual and group therapy, and supervise paraprofessionals. They are consultants to prison administrators on penal issues such as discharging inmates; returning inmates to duty; administering punishment, clemency, and parole; and devising and monitoring a behavior modification system for the maximum security unit. Major current research efforts are directed toward identifying predictors of criminality, isolating personality characteristics of offenders, and developing various treatment methods. For additional information, write: Chief, Psychology Service, U.S. Army Disciplinary Barracks, Fort Leavenworth, KS 66027.

Army Human Engineering Laboratory (HEL)

As Army material is developed or improved psychologists, physicists, engineers and designers work in the laboratory and field to ensure that soldiers are able to effectively operate and maintain the

materiel. In addition, the Human Engineering Laboratory is the lead Development and Readiness Command laboratory for urban terrain and robotics research and development. To assist in transferring human factors engineering data into materiel development programs, Human Engineering Laboratory personnel are assigned to training and doctrine schools and centers. Long-range basic research performed by the Laboratory emphasizes the study of human sensory systems and decision-making process skills as they relate to future Army materiel. For additional information, write: Director, Department of the Army, U.S. Army Human Engineering Laboratory, Aberdeen Proving Ground, MD 21005.

Army Medical Department Psychology (AMDP)

This organization provides the Army with active-duty clinical and counseling psychologists who may be assigned to inpatient or outpatient facilities, alcohol or drug rehabilitation programs, Army hospitals or divisions, or military schools or staffs. These psychologists provide mental health services that include assessment and therapy for patients.

The Army Medical Department trains and supervises paraprofessionals and interns at four American Psychological Association approved internships. Postdoctoral fellowships are available at four additional sites.

Psychologists are consultants to other professionals, command staffs, agencies, and organizations on such diverse topics as race relations, drug abuse, school problems, discipline, and organizational effectiveness.

Army Medical Department Psychology also provides the Army with active-duty research psychologists who conduct research at major medical centers, nonmedical laboratories and research centers, and field research sites. For additional information, write: Psychology Consultant, Office of the Surgeon General, HQDA (DASG-HCC-H), Room 20528, The Pentagon, Washington, D.C. 20310.

Army Medical Research and Development Command (USAMRDC)

This Command serves as the staff agency delegating research to the appropriate nine Army laboratories. The two areas of medical research administered by the Command that involve psychologists are Health Hazards of Military Systems and Combat Operations and Medical Defense Against Chemical Agents. In the area of Health Hazards of Military Systems psychologists investigate responses to stress caused by mechanical factors, the health effects of military systems, and toxic hazards common to military environments. In addition, psychologists look at medical factors that enhance soldier effectiveness by studying stress management; prevention of psychiatric casualties resulting from combat; biomedical factors of stress during combat; performance in heat, cold, and high altitudes; physical fitness and exercise

physiology; personnel selection factors related to physical capacity; artificial intelligence; and robotics.

In the area of Medical Defense Against Chemical Agents, psychophysiolgists study nerve agents, nerve agent antidotes, and neuromuscular responses to chemicals. For more information, write: Commander, U.S. Army Medical Research and Development Command, Fort Detrick, Frederick, MD 21701.

Army Medical Research Institute of Chemical Defense (USAMRICD)

The Army Medical Research Institute of Chemical Defense researches ways to provide medical protection against chemical warfare. An interdisciplinary team of psychologists, physicians, veterinarians, chemists, physiologists, pharmacologists, microbiologists, and entomologists are supported by a veterinary facility housing thirteen animal species from rodent to nonhuman primate. Animal models and methods from the disciplines of behavioral toxicology, behavioral pharmacology, physiological psychology, and neurophysiology are used to investigate the neurobehavioral effects of exposure to nerve agents and the ability of proposed prophylactic or antidotal compounds to moderate these effects.

Psychologists are assigned to three divisions of the laboratory. The Drug Assessment Division assesses the prophylactic or therapeutic potential of newly developed drugs. The Physiology Division assesses neurophysiological consequences of nerve agent exposure. The Pharmacology Division identifies the behavioral correlates of immediate and long-term biochemical changes resulting from nerve agent exposure, either in the presence or absence of antidote compounds. These psychologists are engaged in basic research in one of the leading topics of the neurosciences today--the study of neurotransmission and receptor modulation. For more information, write: Commander, U.S. Army Medical Research Institute of Chemical Defense, ATTN: SGRD-UV-PT, Behavioral Toxicology Branch, Aberdeen Proving Ground, MD 21010.

Army Organizational Effectiveness Center and School (USAOECS)

Clinical and experimental psychologists design, implement, and evaluate a 16-week course that trains career officers in the concepts and skills of organizational development. They monitor and provide support for personal changes experienced during 4 months of intensive academic training. Staff psychologists also evaluate organizational effectiveness paradigms generated in academic and industrial settings to determine their suitability for military application. For additional information, write: Commandant, USAOECS, Fort Ord, CA 93941.

Army Research Institute for the Behavioral and Social Sciences
(ARI)

This organization conducts basic, exploratory, and advanced research that contributes to increased readiness and effectiveness of Army personnel. It employs quantitative psychologists, experimental psychologists, industrial and organizational psychologists, sociologists, mathematical statisticians, computer scientists and operations researchers. The research focuses on five programmatic domains of: manning and maintaining the force, manned systems integration, training for combat effectiveness, organizational cohesion and commitment, and operational effectiveness of military units.

The Army Research Institute's core program is organized into three main laboratories with field units in the U.S. and Europe.

The Manpower and Personnel Research Laboratory focuses on designing and developing methods to improve the process of recruiting, selecting, assigning, and retaining Army personnel. Related efforts seek to improve the effectiveness of military organizations, particularly through analysis of Army organizational structure, management and leadership, and the dynamics of unit cohesion.

The Systems Research Laboratory conducts research on how to realize optimum performance from Army personnel who operate or interface with new automated systems. Modern psychological concepts of human perception, cognition, judgment and decision making are applied to the design of computerized systems and the procedures for their use. The capabilities and limitations of human performance, as well as the people related aspects of system design, affect Army efforts to design, develop and field test equipment that people can easily operate and maintain.

The Training Research Laboratory, continuously examines and refines Army training methodology by drawing on theories of learning, motivation, cognition, measurement, evaluation, and information processing. Current research seeks to identify specific skills required for successful performance in the Army and ways to improve the basic skills of marginal performers to increase their chances for successful Army careers. Training research is also developing more cost-effective training methods by applying simulation and training devices. For additional information, write: Chief Psychologist, U.S. Army and Technical Director, U.S. Army Research Institute for the Behavioral and Social Sciences, 5001 Eisenhower Avenue, Alexandria, VA 22333.

Army Research Institute of Environmental Medicine (USARIEM)

This organization conducts research in environmental medicine: the effects of heat, cold, high terrestrial elevations (hypoxia),

chemical defense, nutrition, physical fitness, and work on the life processes, performance and health of living organisms. For additional information, write: Chief, Health and Performance Division, USARIEM, Natick, MA 01760.

Army Soldier Support Center--Soldier Development Directorate (USASSC-SDD)

This organization identifies, evaluates, and adapts current behavioral science techniques to improve soldier will and skill in the military context. The mission includes ensuring that psychological issues affecting soldier performance are integrated into Army-wide doctrinal literature, combat simulation models, and the materiel acquisition process. Research, clinical, and social psychologists work in a multidisciplinary setting with social workers, specialists in operations research and systems analysis, and active-duty personnel. For additional information, write: Commander, U.S. Army Soldier Support Center, Attention ATZI-NCR-SP, Fort Benjamin Harrison, IN 46216.

Letterman Army Institute of Research (LAIR)

Psychologists study the effect of physiological and social stress on the health and disease processes of guinea pigs and primates. Activation of biological defense mechanisms, heightened susceptibility to disease, and the behavioral correlates of stress are concurrently evaluated. Field research focuses on the physiological and behavioral responses of soldiers to a variety of stressful maneuvers and training experiences. Another area of research is the relationship between stress, sensory isolation, and the recovery process in intensive care units. For additional information, write: Commander, Letterman Army Institute of Research, San Francisco, CA 94129.

United States Military Academy (USMA)

The Department of Behavioral Sciences and Leadership provides a college-level curriculum in the behavioral sciences and management emphasizing the study of organizational leadership. For additional information, write: Professor and Head, Department of Behavioral Sciences and Leadership, United States Military Academy, West Point, NY 10996.

Psychologists with the Science Research Laboratory conduct research projects under the direction of the department dean. The basic research focuses on sex role, gender, leadership, planning, work, and dual career issues. For more information, write: Director, Science Research Laboratory, United States Military Academy, West Point, NY 10996.

Psychologists at the Cadet Counseling Center provide individual and small group counseling. Activities at the Center are designed to contribute to the leadership development of cadets and improve their

interpersonal skills. For additional information, write: Director, Cadet Counseling Center, United States Military Academy, West Point, NY 10996.

Walter Reed Army Institute of Research (WRAIR)

The Division of Neuropsychiatry conducts research on the prevention of combat stress casualties, employing multidisciplinary teams to investigate biological, psychological, and social factors limiting combat performance of healthy soldiers. Psychologists develop behavior models of animals in stressful situations; look at endocrine, neurotransmitter, and neuropeptide responses to stress, fatigue, neurotoxins, and other factors producing psychiatric incapacitation in military personnel; conduct laboratory studies on the influence of sleep loss and biological rhythms on human cognitive and perceptual-motor performance; participate in field studies on the effects of stress on individual health and unit performance; and gather epidemiological data on behavior and psychiatric problems of soldiers and their families. Development of preventive and ameliorative measures is emphasized as an important component of the research process. For additional information, write: Director, Division of Neuropsychiatry, Walter Reed Army Institute of Research, Washington, D.C. 20307.

United States Navy

Medical Service Corps (MSC)

The Medical Service Corps assigns clinical, research, and aerospace psychologists to selected Navy laboratories described below. In addition, clinical psychologists are assigned to medical centers where they manage programs, such as personnel selection and screening for jobs associated with nuclear energy; serve as consultants in mental health and behavioral medicine; manage and operate alcohol and drug rehabilitation centers; counsel patients in clinics; conduct psychological testing; and act as the psychological liaison to other professionals. As educators they provide training in patient management, alcohol and drug rehabilitation, family advocacy, and preparation for prisoner of war conditions.

Psychologists in the Medical Service Corps may be the only health professional assigned to a program or a member of a health team at a major medical center with technical resources, such as biofeedback equipment. For information on active-duty psychologists, write: Chief, Medical Service Corps, Bureau of Medicine and Surgery, Navy Department, Washington, D.C. 20372.

Naval Aerospace Medical Research Laboratory (NAMRL)

This command conducts research, development, testing, and evaluation in aviation medicine and related scientific areas applicable to aviation systems. Psychologists serve as consultants in research methodology to scientists at the Laboratory and may be assigned to any

of three departments. The Human Performances Sciences Department conducts research, development, training, and evaluation in human factors, applied psychological measurement, and psychophysiology related to weapon systems. Psychologists in the human factors division of this department, seek a better match between operator capabilities and aviation weapon systems. The applied psychological measurement research division validates the test battery for selecting applicants to flight training and develops criterion measures for pilot proficiency. The psychophysiology research division focuses on improving the screening techniques for Navy aviators and flight officers.

The Sensory Science Department conducts projects in vestibular, visual, acoustical, and bioengineering sciences. It explores the relationship between environmental stimuli and performance during aviation operations.

The Bioenvironmental Sciences Department studies airsickness experienced by Navy flight officer training squadrons and develops screening devices to identify visual and vestibular deficiencies. For more information, write: Commanding Officer, Code 00F, Naval Aerospace Medical Research Laboratory, Naval Air Station, Pensacola, FL 32508.

Naval Air Development Center (NADC)

The Human Factors Engineering division conducts research and development related to the operation and maintenance of aviation systems requiring human interaction. Psychologists are responsible for the performance adequacy of work stations determining crew size, tasks, and workload. Psychologists also provide support to air weapons designers in the application of new technologies operated by humans. Specific research activities conducted by this organization include designing systems for equipment installation in aircraft that make equipment more accessible for maintenance and developing computerized systems that allow aviators to use voice commands to elicit information displayed on video monitors. For additional information, write: Division Superintendent, Human Factors Engineering Division, Naval Air Development Center, Code 602, Warminster, PA 18974.

Naval Air systems Command (NAVAIRSYSCOM)

This command manages research programs that develop human factors engineering technology applicable to Navy air systems. The emphasis is on improving training and simulation equipment used in preparing flight personnel. Research synthesizes and expands existing information concerning human operator capabilities and limitations in a complex task environment (e.g., voice-interactive systems and decision-augmentation technology). The Command also manages projects that develop technologies for measuring performance. For additional information, write: Commander, Naval Air Systems

Command, Code 340F, Naval Air Systems Command Headquarters,
Washington, D.C. 20361.

Naval Biodynamics Laboratory (NBDL)

This is the principal Navy activity to conduct biomedical research on the effects of impact, vibration, ship motion, and other mechanical forces on personnel of the Navy and Marine Corps. Psychologists and allied personnel have a primary mission to assess and interpret performance effects of mechanical force environments. As such, they are responsible for developing and standardizing human performance test batteries and methodologies; determining performance effects of mechanical forces and their underlying mechanisms; and participating in the evaluation of methods for preventing and treating deleterious effects of mechanical forces. For additional information, write: Commanding Officer, Naval Biodynamics Laboratory, Box 29407, New Orleans, LA 70189.

Naval Health Research Center (NHRC)

This center researches the medical and psychological aspects of health and performance of Navy personnel. Large scale environmental medical studies, which are primarily epidemiological, are conducted in civilian and military settings. Health service delivery research examines issues such as patient satisfaction; provider performance; and organizational factors affecting care quality, job satisfaction, and retention of medical personnel. Other research identifies causes for psychiatric disturbance, the effects of sleep disorders and sleep deprivation, stress effects of combat, and coping with extremes in environmental conditions. Current work involves identifying factors that affect marines' compliance with cold weather procedures, the relation of physical fitness to health-care delivery and use, and the investigation of occupationally induced, stress-related illness. For more information, write: Commanding Officer, Naval Health Research Center, P.O. Box 85122, San Diego, CA 92138-9174.

Naval Medical Research Institute (NMRI)

The Environmental Stress Program Center focuses on the development of means to enhance the safety and efficiency of Navy personnel performing in hazardous environments. Hazards and hazardous conditions are assessed quantitatively by physiological and behavioral theories and methods. The Performance Physiology Branch uses batteries of tests (cognitive, memory, reasoning, motor) to measure performance under varying environmental conditions including cold and heat stresses. Job analyses of target populations are conducted to establish synthetic validity of the test battery that will be used within the programmable environmental chamber. These and related tests are correlated with physiological and biochemical data. For more information, write: Environmental Stress Program Center, Naval Medical Research Institute, Naval Medical Center, Bethesda, MD 20814.

Naval Postgraduate School (NPS)

This organization conducts education and research on military labor force, personnel, training, and human factors issues. Faculty research typically involves work on Department of Defense labor force issues; for example, military compensation and enlistment standards. The master's degree curriculum in labor force, personnel, and training analysis prepares officers for headquarters jobs. The curriculum is interdisciplinary and has course tracks in economics, statistics, industrial and organizational psychology, research methodology, and labor-force modeling. For additional information, write: Department of Administrative Sciences, Naval Postgraduate School, Monterey, CA 93940.

Naval Submarine Medical Research Laboratory (NSMRL)

This laboratory conducts research, testing, and evaluation in problems relating to submarines and diving to depths of less than 200 feet. Although many of the programs are interdisciplinary in nature, the research psychologists are assigned to the Biomedical, Behavioral, Vision, and Auditory Departments. The Biomedical Sciences Department deals with physiological aspects of the submariners and divers operating in their exotic environments. It is concerned with such problems as setting the limits of harmful substances, such as carbon dioxide, in the submarine atmosphere and with decompression tables for the various gas mixtures that are used in diving. The Behavioral Sciences Department focuses on the problems of human performance under these unusual conditions. It evaluates the human factors design of complex pieces of equipment and attempts to improve performance under the oftentimes harsh conditions of the undersea environment. The Vision and Auditory Departments focus on underwater visual and aural requirements and performance measures. Another major project area is analysis of performance in the cold, particularly as it affects the Marine Corps' mission. For more information, write: Commanding Officer, NSMRL, Naval Submarine Base New London, Groton, CT 06349.

Navy Medical Command (NAVMEDCOM)

This organization sponsors all commissioned officers who serve on active duty as psychologists in the Navy Medical Service Corps; coordinates psychological and psychiatric research in Navy medical research laboratories through the Naval Medical Research and Development Command; and coordinates Navy clinical psychology programs and special programs, such as aviation psychology. For additional information, write: Chief, Medical Service Corps Division, Navy Medical Command, Washington, D.C. 20372.

Navy Personnel Research and Development Center (NPRDC)

This center is the principal Navy activity for conducting and coordinating human resources research, development, testing, and evaluation. Projects are organized into three major laboratories and an Office for Technology Advancement.

The Training Laboratory conducts a program to improve individual and team training. The laboratory develops and assesses new instructional technologies by adapting, simulating, and applying technologies to course design, instructional delivery, performance assessment, and training management.

The Manpower and Personnel Laboratory is responsible for developing technology and procedures that will enable the Navy to obtain the most appropriate qualitative and quantitative mix of personnel to meet force requirements and to employ these personnel to achieve maximum military performance and readiness. The laboratory develops systems for determining personnel requirements, allocating work force resources, controlling personnel inventories, measuring occupational performance, recruiting, and acquiring high quality officer and enlisted personnel at minimum cost.

The Human Factors and Organizational Systems Laboratory is responsible for advancing the behavioral technologies supporting an improved understanding of human interaction and the interaction of humans with complex hardware systems. The purpose of the laboratory is to extend knowledge of human processes underlying human-machine functions to optimize the design, development, operation, and maintenance of Navy human-machine systems. Assessments are made of human processes and applications of new techniques and strategies for improving overall organizational effectiveness.

The Office of Technology Advancement conducts innovative and generic investigations of new, emerging, and underdeveloped technologies; evaluates them for possible Navy applications; and identifies the most promising for use by the Navy or for further development by the Center.

For additional information, write: Commanding Officer, Navy Personnel Research and Development Center, San Diego, CA 92152.

Navy Training Equipment Center (NTEC)

The Center conducts research and development projects related to the design and use of training devices and simulators. Its purpose is to improve the effectiveness of trainers and the efficiency of training Navy personnel. Current projects include developing (or procuring) and evaluating flight simulators and designing procedures for cockpit training. The Center also assists other branches of service in their

training and simulation programs. For additional information, write: Commanding Officer, Naval Training Equipment Center, Orlando, FL 32813.

Office of Naval Research (ONR)

The Psychological Sciences Division of this organization conducts and coordinates fundamental psychological research programs with contracts through universities, private industry, nonprofit organizations, and Navy laboratories. Research spans such areas as psychophysiology, measurement, learning, and organizational and engineering psychology. The focus is on developing basic technology for assessing people's potential and competence, more effective training strategies, research approaches to identifying information and cognitive processing skills, more efficient techniques for accessioning personnel, and model management systems. Psychologists also attempt to understand the effects of human perception and decision making on psychomotor behavior to improve the interaction between humans and machines. For additional information, write: Division Leader, Psychological Sciences, ONR, Code 442, 800 North Quincy Street, Arlington, VA 22217.

United States Naval Academy (USNA)

Psychologists at the Naval Academy teach psychology courses in the Department of Leadership and Law, provide academic and personal counseling to midshipmen, and conduct research. An example of psychological research at the Naval Academy is the investigation of admissions criteria related to retention and success as midshipmen. The Naval Regional Medical Clinic located at the Naval Academy, offers personal counseling to midshipmen, adjacent commands, and dependents in the Annapolis area. For additional information, write: Academic Dean, United States Naval Academy, Annapolis, MD 21402.

Information on Government Positions in Military Psychology

For additional information about employment opportunities, sites, grade levels, nature of available assignments, and procedures for submitting applications, write to the Director, Office of Personnel Management, Washington, D.C. 20415, or to the organizations described in this brochure. The Directory of Researchers for Human Research and Development, cited in the references, lists researchers and managers of current people-related research and development. For a copy, write: Manpower and Training Research Information System (MATRIS), Defense Technical Information Center, DTIC-R, San Diego, CA 92152. Persons interested in active-duty positions as psychologists may contact the recruiting service of the military branch they wish to join.

The Division of Military Psychology

The Division of Military Psychology (Division 19) of the American Psychological Association is the major representative body for psychologists who research military problems or who apply psychological knowledge and techniques to military problems. Nearly all members have graduate degrees and more than 80% have doctorate degrees. More than 70% work in noneducational institutions, including government or military service, research groups, private consulting firms, industry, or hospitals.

The purposes of the Division of Military Psychology as stated in its by laws are:

To advance psychology as a science and as a means of promoting the public welfare through research, the application of research findings to military problems, and the encouragement of professional relationships among psychologists interested in the application of psychological knowledge and techniques to military problems.

To foster wide dissemination and application of scientific knowledge and state-of-the art advances in areas relevant to military psychology.

For information on becoming a member of Division 19, write: Membership Office, American Psychological Association, 1200 17th Street NW, Washington, D.C. 20036.

References

- Anastasi, A. (1961). Psychological testing New York: Macmillan.
- Arima, J. K. (1980). What is military psychology? (NPS-54-80-09). Monterey, CA: Naval Postgraduate School.
- Crawford, M. P. (1970). Military psychology and general psychology. American Psychologist, 25, 328-336.
- Flanagan, J. C. et al. (Eds.). (1947). Army Air Forces aviation psychology program research reports (19 vols). Washington, DC: United States Government Printing Office.
- Gilmer, B. H. (1961). Industrial psychology New York: McGraw-Hill.
- Manpower and Training Research Information System. (1983). Directory of researchers for human research and development projects San Diego, CA: Defense Technical Information Center. (AD-B954 782L)
- Nichols, R. S. (1980). The nature of military psychology and uniformed psychologists. In J. K. Arima (Ed.), What is military psychology? (NPS-54-80-09). Monterey, CA: Naval Postgraduate School.
- Sperling, P. I. (1968). A new psychology. American Psychologist, 23, 97-103.
- Uhlener, J. E. (1977). The research psychologists in the Army--1917 to 1977 (Research Rep. 1155, 2nd rev.). Alexandria, VA: U.S. Army Institute for the Behavioral and Social Sciences.
- Wilkins, W. L. (1972). Some relations of medical psychology and military psychology. Military Medicine, 137, 311-316.

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